jection facilities. The training programme should comply with the ECTP proposals for training and it is recommended that there is continuous assessment of students and an exit examination equivalent to the ECTP aptitude test. In the absence of an equivalent examination students should be encouraged to take the ECTP Test of Aptitude.

6.4.4 *ECTP test of aptitude in cervical cytology for cytotechnologists*

In order to set a basic recognised standard of cervical screening throughout the European Community, the ECTP recommends that cytotechnologists who undertake cervical screening take the ECTP aptitude test or an equivalent examination.

6.5 ANATOMOPATHOLOGISTS

6.5.1 *Special responsibilities*

The trained anatomopathologist specialising in cytopathology should take responsibility for the cervical cancer screening service provided by the laboratory including budgetary management where appropriate. This includes undertaking responsibility for all cervical smear reports issued by the laboratory. The anatomopathologist should also personally examine and report on all abnormal and problem cases. Other responsibilities should include implementation of a quality assurance programme, provision of in service training, audit of laboratory practice, liaison with clinical colleagues, monitoring of health and safety within the laboratory and introduction of a programme of research and development.

6.5.2 *Training*

The training should be obtained at a training centre which meets the standards set out in 6.5.3, and would normally be a minimum of 6 months duration. During this time, 2500 cervical smears should be examined. On completion of training the anatomopathologist should be competent to perform primary screening and give an independent opinion on cervical smears that have been prescreened by a cytotechnologist.

The anatomopathologist should take an examination equivalent to the aptitude test for anatomopathologists proposed by the ECTP before assuming responsibility for a cervical cancer screening service.

6.5.3 *Training centres for anatomopathologists*

The training centre should meet the conditions already described for cytotechnologists (see 6.4.3) with the addition that it must provide the trainee with the opportunity of attending gynaecological clinico-pathological meetings on a regular basis which should include relevant histology.

7. Quality Assurance in the Cytology Laboratory

7.1 INTRODUCTION

QUALITY ASSURANCE in cervical cytology is designed to achieve an acceptable reliability and consistency in the results produced in the cytology laboratory.

Internal quality assurance (IQA) refers to the procedures introduced by the staff in the laboratory to monitor results and ensure that they are of a sufficiently high standard to be released.

External quality assurance (EQA) refers to systems of objectively checking laboratory results or reports by an external agency for the purpose of promoting a high standard of performance and establishing comparability between laboratories.

We consider that both schemes are essential for sound laboratory practice.

7.2 INTERNAL QUALITY ASSURANCE

In order to ensure a high standard of laboratory practice the following internal quality control procedures should be instituted:

(1) Specimen collection. The smear should be correctly labelled and matched with the request form. The request form should be checked to ensure that all relevant information has been given.

(2) Preparation and staining. Interpretation of cytological material depends on the quality of preparation and staining. A schedule of technical methods for processing and staining cervical smears should be maintained and updated.

(3) Primary screening. Quality control of primary screening is difficult to achieve on an ongoing basis when pressures of work can intervene. The following methods can be considered.

(a) Selected rescreening. This involves rescreening of cervical smears from patients in selected clinical categories, e.g. abnormal bleeding, postcoital bleeding or a clinically suspicious cervix.

(b) Double screening. This is a reliable method of internal monitoring if it is undertaken by experienced supervisory staff and a high level of vigilance maintained at all times. All diagnostic samples should be double screened.

(c) Review of previous cytology. This is important for internal monitoring as it can highlight failure to recognise an unsatisfactory or suboptimal smear, failure to observe abnormal cells, or errors of interpretation. It should be undertaken in all cases where: (i) current cytological material shows unsuspected abnormalities, (ii) a positive histological diagnosis is reported, (iii) cells evaluated to be abnormal but not confirmed by histology.

(d) A satisfactory staff/workload ratio is essential for good IQA. It is estimated in some countries that one cytotechnologist can undertake the primary screening of approximately 7000 cervical smears annually. One supervisor is required for every three primary screeners.

(e) It is common practice to rescreen a random sample (10%) of negative smears. This should be discouraged as it is an inefficient way of detecting screener errors.

7.3 EXTERNAL QUALITY ASSURANCE

7.3.1 *Slide exchange schemes*

Pilot studies have been carried out in the U.S.A., the U.K. and the Netherlands on the value of slide exchange schemes. In this system a group of 4–5 laboratories will form a cluster. One

laboratory will select up to 10 slides which will be sent from laboratory to laboratory for screening by all staff concerned. At the end of the circulation period a joint meeting should be held to discuss and review the results. This system has proved to be extremely useful for educational purposes. The main drawbacks however are the long time scale involved in circulating slides between laboratories and the fact that staff are able to confer, and are therefore not tested under laboratory conditions. Slides tend to get lost, broken or faded during circulation.

7.3.2 *Proficiency testing*

Proficiency testing is an alternative method of external quality assurance (EQA) which has been used successfully in cytology laboratories in New York State and the U.K. In this scheme, all laboratory staff (both medical and technical) are expected to report on 10 slides within a period of 2 hours. This scheme has the advantage in that it can test all levels of staff participating in cervical cancer screening.

The scheme is best managed by a committee of not more than six people which includes representation from anatomopathologists, cytotechnologists and any other interested group. Committee members should be drawn from laboratories participating in the proficiency testing scheme. The optimal size of this EQA group should be 20–22 laboratories. The committee has a vital role to play in promoting and monitoring the scheme and setting up a slide selection panel.

The day to day running of proficiency testing schemes should be assigned to a facilitator who visits each participating laboratory to explain the nature of the scheme and carry out the test at regular intervals. Confidentiality of results is often an issue in such a scheme.

7.4 LABORATORY ACCREDITATION

Accreditation is assessment of standards by a panel of experts. The assessment will entail a visit to the laboratory to inspect working conditions, and assess working practices, such as staff workload ratio, quality assurance measures, health and safety preconditions, arrangements for staff training, quality of record keeping, arrangements for follow up of abnormal smears, etc.